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COMPOSING WITH GRAPHICS: REVEALING THE COMPOSITIONAL PROCESS THROUGH PERFORMANCE

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ABSTRACT

The research presented here is product of a practice-based process that primarily generates knowledge through collaboration and exchange in performance situations. This collaboration and exchange with various musicians over a period of five years that constitutes a body of practice that is here reflected upon. The paper focuses on non-instructional graphic scores and presents some insights based on performances of works by the author. We address how composition processes are revealed in graphic scores by looking at the conditions of decision making at the point of preparing a performance. We argue that three key elements are at play in the interpretation of these types of graphic scores: performance practice, mapping and musical form. By reflecting particularly on the work *Cipher Series* (Rebelo, 2010) we offer insights into the strategies for approaching the performance of graphic scores that go beyond symbolic codification.

1. INTRODUCTION

Composition and performance practices involving the development of notation that operates differently from common music notation go back to the 1950's. Composers such as Mauricio Kagel, Karlheinz Stockhausen, Krzysztof Penderecki, John Cage, Earl Brown and Morton Feldman are commonly named as pioneers in this type of practice. These composers have typically engaged in graphic scoring during specific periods of their careers and have left bodies of work, which include innovative custom-designed notation alongside works using conventional notation. One needs only to reflect on the musical languages associated with these composers to realize the diversity of the aesthetic field laid out here. Graphic score practices in themselves cover a wide range of notational strategies, from simple extensions of common music notation to completely new models for the use of graphics as a device for communicating musical structures. This paper addresses works that are characterized by an approach to graphic notation that bypasses the symbolic and focuses on communicating musical structures in graphical form. This approach minimizes, or at times, completely abolishes instruction in favour of a freer approach to sharing and interpreting musical ideas.

A deliberate decision to develop notational elements that are not conveying specific or determined performative actions has significant impact on the compositional process. Does it make sense to speak of a score that does not provide information to be read as commands for producing specific sound events? The relationship between the choice of notation and a composer's wider aesthetic project is discussed by Wadle: "the prescriptive notational innovations of Helmut Lachenmann, would reveal much about the composer's conceptualization of the performance techniques he calls for." [1] The dynamics of determinacy and indeterminacy and their relation to notation are well known in the work of John Cage. [2] Cage arguably spent much of his career developing notational strategies that embody his philosophy of music. Mark Applebaum's extra-musical pictographic design informs gesture and form in his *Metaphysics of Notation* (2008) while handing over much of the musical decision making to the performer.

We argue that there are qualities in music communication which go beyond the symbolic and operate at a level of engagement which not instruction based. Both Cardew's *Treatise* (1962) and the iconic *December 1952* by Earl Brown, are notable examples of scores which raise more questions than answers and hence place the performer in a particular decision making situation. In this context, the contract between composer and performer is subverted to allow for a level of autonomy for the performer while preserving a sense of trust. One can argue that decisions about how a score is going to be approached are at play in all types of musical documents, including those based on common music notation. The types of decisions involved and the implication of specific choices to the sound result arguably come to the foreground in non-instructional graphic scores. In this paper we are particularly concerned with the qualities and characteristics of this decision making process and how they relate to the act of composing with graphics. In order to articulate this relationship we will begin not with the compositional process or intention but rather with a reflection on the dynamics of trust and engagement at the point when a performer decides to work with a non-instructional graphic score. Two distinct situations can occur which have a significant impact on subsequent performance preparation. This has to do with whether performer and composer are in communication with each

other or not. In the first case, it is not uncommon for performers to need assurance that there is indeed no interpretative code behind the score. The assumption, even for performers who are accustomed with graphic scores, seems to be that the score is a mediator for a musical structure that pre-exists in the composer's mind. A situation in which performer and composer are not in communication is perhaps more illustrative of the process of performance preparation of these kind of works, seen as the performer arguably gains full autonomy. We will address three aspects, which determine how a score is transformed from a static document into an enabler for music performance in a creative ecology evolving musicians, instruments, venues, audiences etc... These three aspects focus on 1. cultural context and performance practice traditions, 2. relative connections/mappings between graphical and musical languages from the perspective of texture and gesture, and 3. the emergence of form as a derivation of the score's ability to frame musical time.

2. PERFORMANCE PRACTICE

It is important to bear in mind the relationship between composers and performers when it comes to the development of graphic scores. It doesn't take an exhaustive historical survey to recognise that the majority of composers interested in graphic scoring are also performers (John Cage, Barry Guy, John Zorn, Anthony Braxton, Mark Applebaum to name but a few). As such, traditional relationships of power and responsibility between these two roles begin to break down. As a composer engages in graphic scoring for his own performance practice, a culture of interpretation begins to emerge. In performance practice, the graphic score, or any type of score for that matter, becomes part of a broader musical experience.

The score is part of music making just as social relationships are. This musicking [3] determines a performative context in which the score is just one of many elements and doesn't necessarily gain the status of unquestioned authority it has in other musical traditions. The very function of a score as a symbol for 'the work' is in many instances also problematized with graphic scores. In her discussion of Cardew's *Treatise*, Virginia Anderson discusses the function of a score and what it represents for Cardew in contrast to Stockhausen (to whom Cardew was an assistant).

"For Stockhausen, the performance is made in his service; the piece remains his and the performers should divine his intention even when it is not written down. For Cardew, the score is the responsibility of the performers once it is composed." [4]

This performer responsibility is exactly what we want to address through reflecting on the unspoken rules that emerge from any kind of music making. In the case of Cardew, his *Scratch Orchestra* (1962-72), set up to perform his other iconic work – *The Great Learning* – stands as a group of collaborators who commit to a rather specific ideology of music making and therefore share an approach to music which no doubt determines how the

work with graphic scores unfolds. Cardew notably lays out his vision of social and musical dynamics in *A Scratch Orchestra: draft constitution*: "A Scratch Orchestra is a large number of enthusiasts pooling their resources (not primarily material resources) and assembling for action (musicmaking, performance, edification)." [5]

As with any music tradition, non-instructional graphic scores carry with them conventions and agency, which relate to how a specific performance lineage develops. As such, an understanding of this lineage becomes an important element in approaching graphic scores. Performance practice itself influences how a particular score is used.

3. MAPPING

Given the absence of the code that determines how a symbol on a page signifies a particular sound event, non-instructional graphic scores suggest an alternative way of relating graphics to sound. Returning to Cardew, the precision of the graphics and the importance of conscious decision making when preparing a score, is articulated in his *Treatise* handbook:

"The score must govern the music. It must have authority, and not merely be an arbitrary jumping-off point for improvisation." [6]

The role of improvisation in the context of graphic scores is beyond the scope of this paper but it is nevertheless worth reflecting on how, for Cardew, the practice of improvisation stands opposed to the type of music making required when working with a score. One can however observe that most performers working with graphics would consider themselves improvisers, even though when performing a score, free improvisation is not the primary mode of engagement.

Without a code but still with the notion that the score governs the music, the graphic elements inevitably suggest a process of mapping, a set of relationships between the language of the graphics and a musical language (which is invariably situated in a particular performance practice as discussed above). This mapping can take the form of literal association (dense graphics – dense musical texture, graphical weight – musical dynamics, qualities of lines and shapes – musical gestures) or more formalised and codified strategies. In any case, the performer is faced with deciding on how this mapping will occur; either for a particular performance or a deliberate codification for a score to be repeated over multiple performances. In contrast to the work conducted in the area of parameter mapping in computer systems [7], the type of mapping discussed here is relatively unexplored. The mapping processes at question here implicate both multimodal perception, as explored in fields such as visual music [8], and musical practices and conventions, which range from cartoon gestural symbiosis in the music

of Carl Stalling to mathematical translation of curves and textures in the work of Iannis Xenakis.

4. EXTRACTING STRUCTURE AND MUSICAL FORM

An element that is pervasive in the act of engaging with scores of any sort is the realisation of musical structure and form. This is partly to do with the relationship between music, as an ephemeral time-based phenomena and the physical score as an outside time artifact representing a sequence of events that can be seen at a glance. From the layout of the page to the palette of graphic elements employed in a score, a sense of structure is inevitably conveyed through framing (page layout, margins, relationship between pages) and placement of discrete elements (shape, colour, scale, repetition). It is in this domain that the compositional process is revealed. This happens as a process that shifts an understanding of a graphic score as a visual object to a musical one. An object which is made to speak the same language as all other elements of music making: the relativist language of 'louder than', 'same as before', 'more dense', 'higher', 'lower', 'slower', 'faster' etc... This relativism is particularly pronounced as performers face a score, which clearly contains musical information but no code to produce instructions. All decisions are then made from the score and in relation to the score.

5. REVEALING COMPOSITION

The three aspects at play when preparing a graphic score for performance as discussed above gradually reveal the compositional process and the making of the score itself. This process is driven by musical thinking of varying degrees of determinacy (i.e. more or less precise musical structures). It is also guided by a relationship with notation as material, its affordances and conditions. The ways in which different types of notation strategies enable composers to operate directly on musical elements to the extent that to compose and to notate can be seen as the same action, has been discussed elsewhere [9]. In order to better articulate this revealing of the compositional process we will refer to the work *Cipher Series* as an example.

"*Cipher Series* is a collection of graphic scores that are displayed to audience and performers in accordance to a fixed temporal structure generated for each performance. The performance plays on the role of notation as a mediator of listening, setting up a performative condition based on interpretative strategies based on engagement by both the performer and the audience. The change from one graphic score to the next has immediate formal implications for the music and acts as a way of articulating shifts in musical material or interpretation strategy." From *Cipher Series*' performance notes (Rebello, 2010)

As can be seen in the images below, *Cipher Series* employs line drawing (created by hand on a graphics tablet and vector graphics software) in a black and white paginated format. The score is a collection of pages, to be played independently or in sequence. The most common performance format is a pre-determined timed sequence for seven pages. Each page has a pre-determined duration between 40 and 90 seconds and the transition between pages is cued by a 10 second countdown. In this version of the work, the sequence is run twice. In the first iteration, the beginning 30 seconds from each page are recorded and then played back during the second. The sound projection of this playback is intended to be placed as close as possible to the instrument (e.g. loudspeaker inside the piano body) in order to expose the ambiguity of what is live and what is pre-recorded. By exposing a specific graphics-sound relationship twice we explore the very nature of mapping and interpretation. The moment a recording is triggered projecting the sound events made when that same graphic score first appeared, the performer is faced with the decision of whether to imitate her previous interpretation, complement it or indeed do something entirely different. The score of *Cipher Series* was conceived for audience display, which further exposes the decision-making process. By displaying the score the performer is following (without the cued countdown that triggers a change of page) the audience is also invited to derive their own mappings and musical structures.

The layout of *Cipher Series* on the page follows a number of conventions, which are apparent without the need for rules on interpretation. These include the landscape layout with orientation determined by legend at the bottom right corner. This mode of presentation suggests left to right reading although this is not specified. Each page presents a self contained musical sequence of events which can be played once or more times given a specific duration. A number of pages have relatively complex and detailed graphics, at times resembling eastern calligraphy. The density of events makes it practically impossible to engage in a "one-to-one" gestural mapping (i.e. one visual stroke determining one musical gesture) much as in Applebaum's *Metaphysics of Notation*. This is a deliberate attempt to invite the performer to engage with the score in ways other than scanning though events at a regular pace. In fact, in my own performances of the score I often focus on sub-sections of the page for repetition.

The most apparent compositional strategy employed here is perhaps the modular approach to the page as a frame for musical activity. In this context the transitions from page to page articulate the most striking musical changes. Even without a process of codification a performer preparing such a score will respond to the change of scale and texture evident in the difference between page 1 and page 2 below.

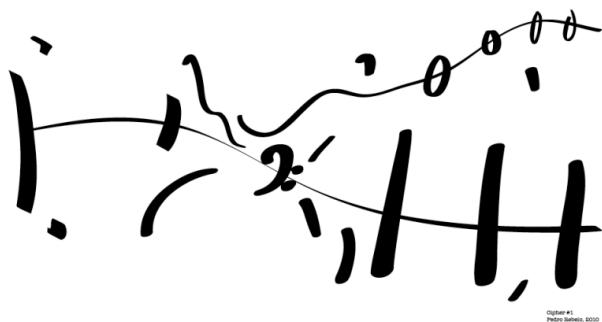


Figure 1. CIPHER Series, Page 1 (Rebelo, 2010)



Figure 2. CIPHER Series, Page 2 (Rebelo, 2010)

Cipher Series was the first in a sequence of works that share this type of graphical language (Quando eu nasci, and Trio both from 2011). These later works are designed for ensembles and develop the language to reflect a sense of musical parts, which inhabit the same. In Trio a simple colour scheme assigns each performer to a part while all other elements of the score remain non-instructional. Compositional strategies here reveal themselves also in the way the three parts relate to each other. Relationships of accompaniment, continuation, counterpoint, synchronisation can be derived from the score to inform musical performance.



Figure 3. Trio, Page 1 (Rebelo, 2010)

6. CONCLUSIONS

By focusing on a type of graphic score practice that is deliberately un-codified and not based on the delivery of instructions for performance, this paper articulates the dynamics at play during the process of performance preparation. We argue that the autonomy transferred to the performer, or to be more precise, to the performance

condition, is an act that reveals the compositional thinking behind a work. By bringing meaning into a score, a performer is following a roadmap created by a composer but deciding on how the journey is to unfold. The score as a roadmap gains the function of a document establishing musical circumstances, which within a performance practice become one of many elements determining the making of music. Composing with graphics ultimately reflects a desire to see the score not as the embodiment of “the work” but rather as a working document which only comes to live in the social workings of music making.

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